

IN THE CLAIMS

The presently pending claims are listed below for reference:

1-14. (Canceled)

15. (Previously Presented) A process for treatment of fluid originating from a submarine oil field, performed on board of a floating unit, comprising:

delivering the fluid from the field to a high pressure gas/liquids separation stage, where the fluid is split into a gas phase substantially consisting of light hydrocarbon gases, and two liquid phases one of which mainly consists of water, the other substantially of hydrocarbon liquids;

delivering the light hydrocarbon gases, separated in the high pressure separation stage, to a reinjection gas compression unit having at least two compression stages;

delivering, after heating, the hydrocarbon liquid separated in the high pressure stage of separation to one or more further stages of gas/liquids separation operating at decreasing pressures, where, in each stage, the liquid is split into a gas phase essentially consisting of light hydrocarbon gases, and two liquid phases one of which mainly consists of water, the other mainly of hydrocarbon liquids;

delivering to a water treatment section the water separated both in the first high pressure separation stage and in the decreasing pressures separation stages;

delivering the light hydrocarbon gases, which have been separated in the decreasing pressure separation stages to corresponding compression units to recompress the gases, wherein to recompress gases in the compression units ejectors are employed, which use a compressed gas exiting from one of a plurality of compression stages of the reinjection gas

compression unit as a driving fluid of each single ejector.

16. (Previously Presented) The process according to claim 15, wherein the driving fluid of each single ejector is the compressed gas exiting from a second-last or from a last compression stage of the reinjection gas compression unit.

17. (Previously Presented) The process according to claim 15, wherein the further decreasing pressure gas/liquids separation stages are in number of two, one at intermediate pressure and one at lower pressure.

18. (Previously Presented) The process according to claim 17, wherein the driving fluid of the ejector of the compression unit of the hydrocarbon gas separated in the intermediate pressure stage is the compressed gas exiting from the last stage of the reinjection gas compression unit.

19. (Previously Presented) The process according to claim 17, wherein the driving fluid of the ejector of the compression unit of the hydrocarbon gas separated in the lower pressure stage is the compressed gas exiting from the last stage of the reinjection gas compression unit.

20. (Previously Presented) The process according to claim 15, wherein each stage of compression of the reinjection gas compression unit comprises at least a biphasic separator to remove liquid particles, a compressor, and a heat exchanger to cool the compressed gas.

21. (Previously Presented) The process according to claim 20, wherein the

compressed gas to be used as driving fluid is taken after the compressor.

22. (Previously Presented) The process according to claim 21, wherein the compressed gas to be used as driving fluid is taken after the compressor and before the cooling heat exchanger.

23. (Previously Presented) The process according to claim 19, wherein the reinjection gas compression unit includes three compression stages.

24. (Previously Presented) The process according to claim 15, wherein a last stage of separation at decreasing pressures is performed at sub-atmospheric pressure.

25. (Previously Presented) The process according to claim 15, wherein the recompressed gases exiting from the compression units are used as fuel gases.

26. (Previously Presented) The process according to claim 15, wherein the recompressed gases exiting the compression units are sent to the reinjection gas compression unit.

27. (Previously Presented) A floating production unit comprising:
a treatment system for fluids originating from an oil field comprising a high pressure separator and at least a second lower pressure separator;
one reinjection gas compression unit having at least two compression stages; and
at least a compression unit equipped with a suitable ejector.

28. (Previously Presented) The process according to claim 15, performed in a floating production unit.